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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PYZOCHA, MICHAEL J

ART UNIT PAPER NUMBER

2137

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Applicati n No. 09/917,620	Applicant(s) CORDELLA, ROBERT H.	
	Examiner Michael Pyzocha	Art Unit 2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Claims 1-22 are pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Regarding claims 2 and 6, the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

5. Regarding claims 3-4, 14, 17, 21-22, the phrase "for example" or (e.g.) renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

6. Regarding claims 5-22, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations

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following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

7. Any claims not specifically addressed are rejected based upon their dependency on a rejected claim.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-6, 8-13 are rejected under 35 U.S.C. 102(b) as being anticipated by the LILO system Version 21 from 09 December 1998 (see PARD) as described in LILO by Werner Almesberger.

As per claims 1 and 5, LILO discloses a method for dividing a workstation into a set of separate machines such that each member of the set of separate machines is autonomous, activated separately in time (i.e. not simultaneously active with other members of the set of separate machines), and does not exchange information with other members of the set of separate machines, wherein any member of the set of separate machines can be connected to external information systems and resources without

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contamination (from signals from such external systems and resources) of other members of the set of separate machines (see LILLO page 1 where it can act as a "boot manager" loading separate operating systems that can be loaded from hard disks of floppy disks), comprising the steps of: a. connecting a separate mass-storage device (for each separate machine) to the workstation; wherein said separate mass-storage device contains the configuration and boot/start-up commands specific to its particular separate machine (see page 1); b. inserting a mass-storage device selector into the workstation, such that said selector function activates a subset of mass-storage devices connected to the workstation and deactivates mass-storage devices (connected to the workstation) not in the subset of activated mass-storage devices (see page 1 where the mass-storage device is either a hard disk or floppy disk); c. configuring the mass-storage device selector to initiate a workstation boot/start-up sequence as a stage of each mass-storage device selection sequence, wherein the boot/start-up sequence is a workstation reset function which prevents any information exchange between members of the set of separate machines (see page 1 where it is inherent that information between two different operating systems cannot be exchanged); d. disabling any external connectivity of the workstation during a

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mass-storage device selection sequence, such that no hostile external information signals impact the workstation during said selection sequence (see LILO where the selection is done during boot-up which is before any connections are made); e. restoring deactivated mass-storage devices to an initial non-contaminated state (see page 37 where these packages can be one of the other operating systems as on page 1).

As per claim 2, LILO discloses the step of connecting includes external (to the workstation) and internal (to the workstation) mass-storage devices, whereby such mass-storage devices range from standard hard-disk drive (HDD) units to removable media devices such as tape drives, ZIP drives, CD-R drives, CD-R/W drives, writeable DVD drives, and like devices (see page 1).

As per claim 3, LILO discloses the step of inserting and the step of configuring includes the implementation of an optional access control function (e.g. lock & key) for the mass-storage device selector, thus enabling the capability to restrict certain users (of a workstation) to specific members of the set of separate machines, of a multiple user workstation, thereby forcing a degree of privacy protection for the multiple users of said workstation (see pages 21-23 where the addition of a password supplies access control).

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As per claims 4 and 6, Official Notice is taken that it is well known in the art for a mass-storage device is treated as a logical mass-storage unit and can include a multiplicity of mass-storage devices connected in such manner as to operate as a single mass-storage unit. Motivation to do so would have been to have the memory of two mass-storage units acting as one.

As per claim 8, LILO discloses the means for initiating is an automatic step of the mass-storage unit selection process (see page 1).

As per claim 9, LILO discloses the means for restoring is a user-optional, application-specific, function which generically involves a disk-copy type process, such that the deactivated mass-storage unit receives an image/copy of the contents of a base mass-storage unit connected to the workstation (see page 1 and page 37).

As per claims 10-11, LILO discloses a base mass-storage unit is defined at operational initiation of the workstation and is a member of the set of separate machines (of the workstation) which is available only for the mass-storage unit restoration process, and is not available for selection as the component of an operational separate machine; wherein a multiplicity of base mass-storage units is defined (see page 1 where each

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installation disk of the operating systems is the base mass-storage unit).

As per claim 12, LILO discloses the means for connecting includes the means for connecting a multiplicity of mass-storage units, each of which is structured as a full computer system, in such manner that each of the separate machines operates as an autonomous embedded unit to the host workstation, wherein each embedded unit has the functionality of a complete computer system of its type, in addition to its mass-storage unit function (see page 1).

As per claim 13, LILO discloses each member of the set of computer-system-structured mass-storage units has the capability to be reset by the selection process at the time of its selection, whereby the initiation of an actual reset function is an application specific determination by users of the workstation (see page 1 where the user selects which operating system to invoke).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over LILO as applied to claim 5 above, and further in view of IEEE (dictionary).

As per claim 7, LILO fails to disclose the use of the XOR process for selection.

However, IEEE teaches XOR (see page 403).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use IEEE's XOR selection process in the LILO system.

Motivation to do so would have been that this process could be performed in binary (see IEEE page 403).

12. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over LILO as applied to claim 12 above, and further in view of Reed et al (U.S. 5,903,732).

As per claim 14, LILO fails to disclose each computer-system-structured mass-storage unit is configured in such manner that its separate machine interfaces with a different external resource, wherein each of said external resources is classified,

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thus implementing a CMWS (Compartmented Mode Workstation) capability', for the workstation.

However, Reed et al teaches implementing a CMWS (see column 4 lines 34-57).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Reed et al's CMWS in the selection system of LILO.

Motivation to do so would have been to provide access control (see Reed et al column 4 lines 34-39).

13. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over LILO as applied to claim 12 above, and further in view of dmoz (webpage).

As per claim 17, LILO fails to disclose independently configuring the computer-system-structured mass-storage units to be a cluster.

However, dmoz teaches the use of clusters to perform functions (see page 1).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use dmoz's clusters in the LILO system.

Motivation to do so would have been to allow the independent systems to work together efficiently (see dmoz page 1).

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14. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified LILO and Reed et al system as applied to claim 14 above, and further in view of Kellum (U.S. 6,487,664).

As per claim 15, the modified LILO and Reed et al system fails to disclose each computer-system-structured mass-storage unit has the capacity to filter outgoing information signals from its separate machine, thereby preventing unauthorized release of information.

However, Kellum teaches such a filter (see column 7 lines 4-26).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Kellum's filter as a part of the modified LILO and Reed et al system.

Motivation to do so would have been to prevent inadvertent compromise of information (see Kellum column 7 lines 4-26).

15. Claims 16, 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over LILO as applied to claim 5 above, and further in view of Aguilar et al (U.S. 6,446,203).

As per claim 16, LILO fails to disclose each separate machine is physically separated from all other separate machines connected to the workstation, thus further reducing the probability of information exchange between the separate

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machines connected to the workstation, wherein such physical separation is a property of the architecture of the invention.

However, Aguilar et al teaches such a distributed system (see column 3 lines 21-33).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Aguilar et al's method of distributing a system to distribute LILO's operating systems.

Motivation to do so would have been support distributed processing across variety of products in a multi-platform, thin-client environment (see Aguilar et al column 3 lines 21-33).

As per claim 18, the modified LILO and Aguilar et al system discloses each physically-separated separate machine defined by a computer-system-structured mass-storage unit, hosts its own software operating-system (such as Windows, Linux, or like software operating-systems), thus creating and maintaining a separate isolated domain for said operating-system, whereby a particular software operating-system hosted by a member of the set of separate machines of a workstation may be identical to that operating-system hosted by another member of the set of separate machines of said workstation, without exchange of information signals between such members of the set of separate machines of the workstation (see LILO page 1).

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As per claim 19 the modified LILO and Aguilar et al system discloses the confinement of a specific operating system (such as Windows, Linux, etc.) to a particular separate machine of the host workstation, also confines any peculiarities, errors, incompatibilities, contamination, and such deficiencies (of an operating-system), to that particular separate machine, thereby adding an element of Fault-Tolerance to the host workstation (see LILO page 1).

As per claim 20, the modified LILO and Aguilar et al system discloses the use of the separate machines provides the users of the host workstation an operational bridge between incompatible external (to the workstation) resources, wherein this operational bridge provides a "virtual interoperability" capability between incompatible external resources, whereby such external resources can include various incompatible "instant messaging" type systems, providing relief to the problem of incompatibility of such external resources (see LILO page 1 where it is clear that if accessing one type of operating system from a system that does not have that operating system provides the "virtual interoperability").

16. Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified LILO and Aguilar et al system as

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applied to claim 20 above, and further in view of Wakamatsu (U.S. 5,926,105).

As per claims 21-22 the modified LILO and Aguilar et al system fails to disclose a subset of the set of separate machines of a workstation are configured to store and process internal (e.g. classified, proprietary, etc.) information, wherein such configuration restricts connectivity (of members of this subset of separate machines) to operate in a stand-alone mode (i.e. zero external, to the workstation, connectivity), thereby defining a subset of stand-alone, protected separate machines, whereby a stand-alone operational mode is generically the most secure from external contamination and hacker type attack.

However, Wakamatsu teaches such a restriction (see column 1 lines 38-50 and column 4 lines 51-57).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Wakamatsu's method of restriction access in the modified system of LILO and Aguilar et al.

Motivation to do so would have been stop the transmission of confidential information to third parties not having access (see column 1 lines 38-50).

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Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chan et al (US 5388267 A) discloses a method for dual booting, Nguyen et al (US 5887163 A) discloses a method of dual booting, Hill et al (US 5987605 A) discloses a method for dual booting, and Schneider (US 6363487 B1) discloses a method for dual booting with a firewall.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pyzocha whose telephone number is (571) 272-3875. The examiner can normally be reached on 7:00am - 4:30pm first Fridays of the bi-week off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJP


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